an imaging element which obtains an observation image of the specimen;

recognizing means for, when the setting of the observation condition in the microscope is changed, recognizing changed setting information;

color temperature detecting means, electrically connected to the recognizing means and provided between the light source of the microscope and the specimen, for detecting color temperature;

signal processing means for processing an image signal output from the imaging element in accordance with the changed setting information recognized by the recognizing means; and

gain setting means, electrically connected to the signal processing means, for changing a gain of the image signal in accordance with the color temperature detected by the color temperature detecting means.

17. (New) A microscope electronic camera for a microscope having a function of changing a setting of an observation condition of a specimen, said microscope electronic camera comprising:

an imaging element which obtains an observation image of the specimen;

recognizing means for, when the setting of the observation condition in the microscope is changed, recognizing changed setting information, and also for recognizing magnification/

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specimen change information relating to at least one of a change of observation magnification and a change of the specimen;

signal processing means for processing an image signal output from the imaging element in accordance with the changed setting information recognized by the recognizing means; and

filter coefficient changing means, connected to the signal processing means, for changing a filter coefficient, which determines a degree of contour accentuation suitable for observation with respect to the image signal, in accordance with the magnification/specimen change information recognized by the recognizing means.

18. (New) A microscope electronic camera for a microscope having a function of changing a setting of an observation condition of a specimen, said microscope electronic camera comprising:

an imaging element which obtains an observation image of the specimen;

recognizing means for, when the setting of the observation condition in the microscope is changed, recognizing changed setting information, and also for recognizing observation method change information relating to a change of observation methods;

signal processing means for processing an image signal output from the imaging element in accordance with the changed setting information recognized by the recognizing means;

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setting means, connected to the signal processing means, for setting a tone conversion table corresponding to an observation method in accordance with the observation method change information recognized by the recognizing means; and

correcting means for correcting a tone of the image signal based on the tone conversion table set by the setting means.

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19. (New) A microscope electronic camera for a microscope having a light source, an optical system for forming an image of a specimen, and a function of changing a setting of an observation condition of the specimen, said microscope electronic camera comprising:

an imaging element which obtains an observation image of the specimen;

a microscope control section configured to, when the setting of the observation condition in the microscope is changed, recognize changed setting information;

a color temperature detection section, electrically connected to the microscope control section and provided between the light source of the microscope and the specimen, configured to detect color temperature;

an image control section configured to process an image signal output from the imaging element in accordance with the changed setting information recognized by the microscope control section; and

a gain setting section which is electrically connected to the image control section and which is configured to change a gain of the image signal in accordance with the color temperature detected by the color temperature detection section.

20. (New) A microscope electronic camera for a microscope having a function of changing a setting of an observation condition of a specimen, said microscope electronic camera comprising:

an imaging element which obtains an observation image of the specimen;

a microscope control section configured to, when the setting of the observation condition in the microscope is changed, recognize changed setting information, and also configured to recognize magnification/specimen change information relating to at least one of a change of observation magnification and a change of the specimen;

an image control section configured to process an image signal output from the imaging element in accordance with the changed setting information recognized by the microscope control section; and

a filter circuit which is connected to the image control section and which changes a filter coefficient, which determines a degree of contour accentuation suitable for observation with respect to the image signal, in accordance with the

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magnification/specimen change information recognized by the microscope control section.

21. (New) A microscope electronic camera for a microscope having a function of changing a setting of an observation condition of a specimen, said microscope electronic camera comprising:

an imaging element which obtains an observation image of the specimen;

a microscope control section configured to, when the setting of the observation condition in the microscope is changed, recognize changed setting information, and also configured to recognize observation method change information relating to a change of observation methods;

an image control section configured to process an image signal output from the imaging element in accordance with the changed setting information recognized by the microscope control section; \land

an (LUT) setting section which is connected to the image control section and which sets a tone conversion table corresponding to an observation method in accordance with the observation method change information recognized by the microscope control section; and

an LUT circuit configured to correct a tone of the image signal based on the tone conversion table set by the LUT setting section.

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